UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/776,730	02/06/2001	David Duncan	663-151/MBE	2365

7590 08/11/2003

Mark B. Eisen
c/o Dimock Stratton Clarizio
20 Queen Street West, Suite 3202
Box 102
Toronto, ON M5H 3R3
CANADA

EXAMINER
EDOUARD, PATRICK NESTOR

ART UNIT	PAPER NUMBER
2654	2

DATE MAILED: 08/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/776,730	DUNCAN, DAVID	
	Examiner	Art Unit	
	TREFFANEY R LOWE	2697	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 February 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 February 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2 and 10 rejected under 35 U.S.C. 103(a) as being unpatentable over Kopf (U.S. Patent 5,825,830) in view of Fielder et al. (U.S. Patent 6,446,037), hereinafter referenced as Fielder, in further view of Warren et al. (U.S. Patent 5,963,909), hereinafter, referenced to as Warren.

Regarding **claim 1**, Kopf discloses a method of compressing digital audio data and other data into an audio signal for transmission to a receiving station, (title) comprising the steps of:

d. packing compressed audio and other data into remaining space within the compression packet, (col. 5, lines 52-54). Kopf does not disclose the method of dividing the audio signal in to blocks, then packets and into words or tagging. However this method is well known in the art, as taught by Fielder and Warren.

Fielder discloses a method of audio coding comprising the steps of:

a. dividing the audio signal into compression blocks, each compression block consisting of a plurality of compression packets, each compression packet consisting of a plurality of words, (col. 8, lines 17-20)

b. providing one word in each compression packet with a component of configuration data, whereby a compression block contains sufficient configuration information to

a manner of packing data into the compression block, (col. 8, lines 41-43) , however Fielder does not teach tagging a word in the compression packet. The method of tagging is well known in the art as taught by Warren.

In a similar field of endeavor, Warren discloses a method comprising the steps of:

c. tagging one word in each compression packet to identify the tagged word as a word containing configuration information, (col. 2. lines 9-14)

e. transmitting the compression packets in a predetermined sequence to a receiving station,

wherein the receiving station constructs the configuration information from the tagged words in a compression block and decodes the compressed audio data and other data according to the configuration information. (col. 2, lines 3-13)

It would have been obvious to modify the compression method taught by Kopf with Fielder's audio coding method to provide a device that would divide the audio signal in blocks, then packets and words and providing one word with configuration information for the purpose of being able to compress the data to add more information in the remaining spaces.

It would have been further obvious to modify Kopf and Fielder's compression and coding method with the system taught by Warren to provide tagging to the word in the compression packet for the purpose of providing information regarding to compress packet and being able to restore it to the original signal.

Regarding **claim 2**, Kopf, Fielder and Warren disclose the method of **claim 1**, Fielder further discloses the method in which each compression packet consists of four word pairs. (col. 9, lines 22-24)

Regarding **claim 10**, Kopf, Fielder and Warren disclose the method of **claim 1**, Fielder further discloses a method in which the audio data and other data comprises metadata, linear time code data and channel status data. (see Fig. 6a, col. 20, lines 49-53)

Claims 3-4 and 8 rejected under 35 U.S.C. 103(a) as being unpatentable over Kopf, Fielder and Warren as applied to claims 1-2 and 10 above, and further in view of Uramoto (U.S. Patent 6,243032) hereinafter referenced to as Uramoto.

Regarding **claim 3**, Kopf, Fielder and Warren discloses the method of **claim 2**, however they do not specifically teach a method in which a first most significant bit of a first word pair is tagged. This method, however, is well known in the art as taught by Uramoto.

In a similar field of endeavor, Uramoto disclose the method in which a first most significant bit of a first word pair is tagged. (col. 6, lines 15-16, Table 1 and col. 8, line 44: where bit position 0 is the MSB)

It would have been obvious to modify Kopf, Fielder and Warren's method of providing a compression method dividing the audio signal and applying a tag to a word with Uramoto's audio/video signal unit to provide a method that would tag the first word in the MSB.

Regarding **claim 4**, Kopf, Fielder, Warren and Uramoto discloses the method of **claim 3,** Uramoto further discloses the method in which a second most significant bit of the first word pair holds the component of configuration data (frame head). (col.6, lines 16-17 and Table 1)

Regarding **claim 8**, Kopf, Fielder, Warren discloses the method of **claim 2**, however they fail to specifically teach in which each word has 24, 20 or 16 bits. This is a common method in the art as taught by Uramoto

In a similar field of endeavor Uramoto disclose the method in which each word has 24, 20 or 16 bits. (see Fig. 2a-c)

It would have been obvious to modify Kopf, Fielder and Warren's method to compression audio signal and having the words as 24, 20 or 16 bits as taught by Uramoto for the purpose of modifying the compression method at anytime.

Claims 5-7 rejected under 35 U.S.C. 103(a) as being unpatentable over Kopf, Fielder and Warren as applied to **claims 1 and 2** above, and further in view of Tanaka et al. (U.S. Patent 6,560,403), hereinafter referenced to as Tanaka.

Regarding **claim 5**, Kopf, Fielder and Warren teach the method of **claim 2**, however they do not specifically disclose a method in which each compression block consists of 48 compression packets. This is well known in the art as taught by Tanaka.

In a similar field of endeavor, Tanaka discloses a method in which each compression block consists of 48 compression packets (general information). (col. 11, lines 15-20)

It would have been obvious at the time of the invention to modify Kopf, Fielder and Warren's methods with that of Tanaka to provide a block having 48 compression packets for the purpose

Regarding **claim 6**, Kopf, Fielder, Warren and Tanaka disclose the method of **claim 5,** Tanaka further discloses the method in which the compression information comprises synchronization information, transport identification information, and data identification information. (see fig 22: synchronization information and fig. 25: physical data is regarded by the examiner as data identification)

Regarding **claim 7**, Kopf, Fielder, Warren and Tanaka disclose the method of **claim 6** in which one or more bytes are dedicated to the synchronization information, one byte is dedicated to transport identification information and one byte is dedicated to data identification information. (see fig 22: synchronization information and fig. 25: physical data is regarded by the examiner as data identification)

Claim 9 rejected under 35 U.S.C. 103(a) as being unpatentable over Kopf, Fielder and Warren as applied to **claim 1** above, and further in view of Paik et al. (U.S. Patent 5,241,382), hereinafter referenced to as Paik.

Regarding **claim 9**, Kopf, Fielder and Warren disclose the method of **claim 1**, however they do not teach a method in which the audio data comprises a plurality of channels and is packed into the remaining space in the compression packet leaving no empty bits between channel data. This is a common method as taught by Paik.

In a similar field of endeavor, Paik discloses the a method in which the audio data comprises a plurality of channels and is packed into the remaining space (filler bits) in the compression packet leaving no empty bits between channel data. (col. 10, lines 8-14)

It would have been obvious to modify Kopf, Fielder and Warren's methods with the method taught by Paik for the purpose of filling the compression packet with other data.

Regarding **claims 11-20**, are similar in scope to claims 1-10, therefore, they are rejected on the same rationale.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TREFFANEY R LOWE whose telephone number is 703-305-5593. The examiner can normally be reached on M-F: 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JEFFERY HOFFSASS can be reached on 703-305-4717. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-9430 for regular communications and 703-746-9430 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.

trl
June 29, 2003

Richemond Dorvil
Primary Examiner